

CLAIMS

1. A liquid resin, intended in particular for the sizing of mineral fibers,
5 exhibiting a dilutability in water at 20°C at least equal to 1 000%, **characterized in that** it is composed essentially of condensates obtained from a phenolic compound, from formaldehyde and from an aminoalcohol according to the Mannich reaction.
 2. The resin as claimed in claim 1, **characterized in that** the phenolic compound is phenol, a cresol, resorcinol or a mixture of these compounds.
 - 10 3. The resin as claimed in claim 1 or 2, **characterized in that** the aminoalcohol is chosen from the compounds of formula
- $$\begin{array}{c} R_1 \\ | \\ N-H \\ | \\ R_2 \end{array}$$
- in which R₁ and R₂, which are identical or different, represent H or a linear or branched C₁-C₁₀, preferably C₂-C₅, hydrocarbonaceous chain which can include 15 one or more unsaturations and one or more OH radicals, at least one of R₁ or R₂ including at least one OH radical.
4. The resin as claimed in claim 3, **characterized in that** the OH radical is carried by the terminal carbon atom of the hydrocarbonaceous chain and, 20 preferably, each R₁ and R₂ radical carry a hydroxyl functional group on the terminal carbon of the hydrocarbonaceous chain.
 5. The resin as claimed in claim 4, **characterized in that** the aminoalcohol is monoethanolamine or diethanolamine.
 - 25 6. The resin as claimed in one of claims 1 to 5, **characterized in that** it exhibits a level of free formaldehyde of less than 0.4%.
 7. The resin as claimed in one of claims 1 to 6, **characterized in that** it exhibits a level of free phenolic compound of less than 0.02%.
 - 30 8. The resin as claimed in one of claims 1 to 7, **characterized in that** it exhibits a level of free formaldehyde of less than 0.25%, a level of phenolic compound of less than 0.01% and an infinite dilutability.
 9. The resin as claimed in one of claims 1 to 8, **characterized in that** it exhibits a level of ash of less than 0.04% by weight of dry resin.

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